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SIMPLE GROWTHS OF THE UTERINE MUCOSA.

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SIMPLE GROWTHS OF THE UTERINE MUCOSA.

THE so-called mucous polypi of the uterus, though known to be the frequent source of marked clinical symptoms, do not seem to have had bestowed upon them the same amount of attention with regard to their structure and mode of growth which has been given to other uterine neoplasms.

Why this should be it is difficult to conjecture; for certainly their frequency, and the severity of the symptoms they give rise to, are sufficient to warrant their closer investigation.

Perhaps it is from their usual small size and the comparative ease with which they are, as a rule, removed, that text-book writers dismiss their consideration in so brief and superficial a manner. In case, therefore, this assumed reason be correct, it is my intention, from a few clinical examples, to show that such is an erroneous idea, as from their occasional large size, severe clinical symptoms, and difficulty of removal and eradication, they deserve fuller and closer description.

CASE I.—Patient, aged 32, came under my notice in Oct. 1886, complaining of intense weakness, which she thought was due to constant leucorrhœal discharge, which had lasted nine months. Menstruation regular in amount and recurrence.

On examination the anterior cervical lip was found to have attached to it a bilobed, extremely soft and partially pedunculated red growth, resembling a small tomato. This was removed, and the symptoms ceased. The removal by scissors was attended with considerable difficulty, on account of the friability and vascularity of the tumour, the hæmorrhage requiring vaginal plugging for its arrest.

On examining the growth after removal, its original shape and structure was impossible to define, as from its extreme softness it had been much torn, and was represented merely by bits of broken pulpy tissue. These were sent to Dr Barrett for examination, and were found to be chiefly composed of glandular tissue, lined with columnar ciliated epithelium, and supported, as seen under Microscope 1, by but scanty connective tissue (Fig. 1).

In six weeks patient returned with her old symptoms, and a



FIG. 1. Simple adenoma of cervix uteri. Case I.

similar growth, about the size of a bean, was found growing from the same site as before. This I removed with the thermo-cautery, and kept the patient thoroughly under observation for six months in case of further recurrence, but during this time there was none.

In October 1889 (three years later) she again returned complaining as before, and the growth was again found growing from the same situation. So I now amputated the anterior cervical lip along with the tumour.

The patient is now, I am pleased to say, in excellent health, and no return of the disease is evident. Since the last operation she has been delivered of a healthy son.

CASE II.—Mrs P., aged 70; menopause at 45; in May 1892 complained of severe bleeding from the vagina, and on examination the os uteri was found dilated, and projecting through it was a large irregular mass of a dark red colour. The history, as obtained from Dr Jeffrey, Ayton, was that eighteen months previously the patient had complained of vaginal hæmorrhage, and he found her suffering from a similar tumour of large size, which he removed with difficulty; it weighed 21 oz. Since that

time he had removed from her three other growths similar in character, but smaller in size, the last weighing 12 oz. He therefore sent her into hospital to see if nothing could be done to prevent further recurrence.

After removal of the polypus, which weighed 8 oz., the uterine cavity was examined. It was roomy, and measured 5 inches, and situated within it could be felt two rough protuberances—the one on the anterior wall of the uterine body, the other on the posterior wall of the uterus about an inch from the os externum—evidently commencing growths of a similar character.

The polypus was pear-shaped, its external surface irregular, and opening here and there over it were the mouths of canals which evidently invaded its substance. On section, the substance of the tumour varied considerably in consistence, being hardish and fibrous-like in the centre, and gradually becoming softer towards its periphery, while coursing through it canalicular spaces could be seen cut longitudinal and transversely, communicating with the exterior by the openings already described on the surface (Fig. 2).

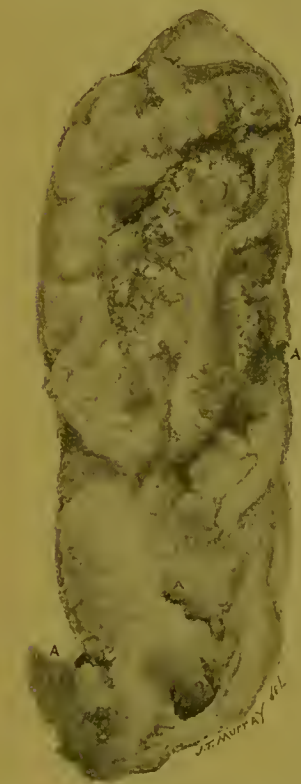


FIG. 2. Section through polypus from Case II., showing channelled character (A, canaliculated spaces opening on surface).

By the nitric acid test of Dr Stiles the structure could be seen

by the naked eye to be entirely connective tissue in the centre, while the periphery and lining of the canalicular spaces were evidently cellular.

The microscope corroborated this excellent naked-eye test, and showed the substance of the growth to be made up almost entirely of connective tissue, while the surface and lining of the canals was formed by a single layer of columnar epithelium.

The connective tissue in the centre of the growth was well-formed fibrous tissue undergoing hyaline change, while towards the periphery the tissue became more embryonic and cellular.

Considering the benign character of the growths, and their apparently but slight effect on the patient's health, it was decided not to perform any radical operation, so the uterine cavity was merely swabbed out with iodine. Since that time, I am informed by her doctor, the patient has spontaneously passed five more polypoidal-looking masses, varying in size from a hen's egg to the closed fist. With each a slight hæmorrhage and pain occurs, but in the interval the patient is well and enjoys good health.

The last one, passed ten days ago (kindly forwarded to me by Dr Jeffrey of Ayton), I have the pleasure of showing.

Its surface is partly smooth and partly rough, the rough portion looking as if the growth had been torn across. The polypus as a whole, where fresh, was softish, about the size and shape of an ordinary Cambridge sausage, and weighed 8 oz.

On close examination by the nitric acid test and the microscope, it is seen to be entirely made up of blood-clot, and is thus an example of a fibrinous polypus. The microscope also shows the fibrinous matrix to be infiltrated by leucocytes and young connective tissue corpuscles, while coursing all through may be seen young bloodvessels, with coats formed of a single layer of endothelium,¹—facts which conclusively show an attempt has been made at organization of the clot, which must therefore have had intimate and organic connexion with the uterine wall, and thus materially differs from a simple retention clot.

CASE III.—A patient, aged 32, who had suffered from menorrhagia and leucorrhœa for seven months, on examination showed a pedunculated growth, somewhat larger than a chestnut, growing from within the cervix and projecting into the vagina. Its surface was rough and irregular, and had a cauliflower feel, but it was freely movable, did not bleed upon examination, and the vaginal discharge was not foetid.

On grasping with volsella it bled profusely, and I removed it with the écraseur.



FIG. 3. Section of lobule from papillary polypus. Case III. (From Nature.)

¹ Specimen demonstrated under microscope.

The growth, on examination, closely resembled the appearance of a cauliflower, its rough irregular surface being broken up into a number of cotyledons (Fig. 3).

On microscopic examination it proved to be a connective tissue outgrowth of a papillary type, the individual papillæ being covered by a layer of low columnar epithelium. After removal symptoms ceased, and there has as yet been no return (two years).

CASE IV.—A patient, aged 30, who complained of weakness, the result of menorrhagia, metrorrhagia, and profuse leucorrhœa of some months' standing.

On examination a small pencil-like growth was felt projecting through the os externum and attached to the uterine mucosa, fully an inch up the canal. It was smooth and of firmish consistence.

After removal the microscope showed it to consist of well-formed fibrous tissue, through which coursed numerous glands lined by cylindrical ciliated epithelium.

The surface was covered by numerous layers of stratified squamous cells. On the surface the glands freely opened, the transition from the cylindrical cells lining the gland to the squamous epithelial covering of the growth being quite abrupt.

There has been no return of the growth (eighteen months).

In attempting to classify the growths obtained from the above-mentioned cases, that from Case I. appears to be a well-marked example of a true adenoma, somewhat resembling a type of cervical growth already described by Underhill before this Society as a "Channelled Polypus," but from this it chiefly differs in the small amount of inter-glandular stroma met with.

From the microscopic appearances it must be classified as benign, its recurrence resulting from an insufficient eradication of its base.

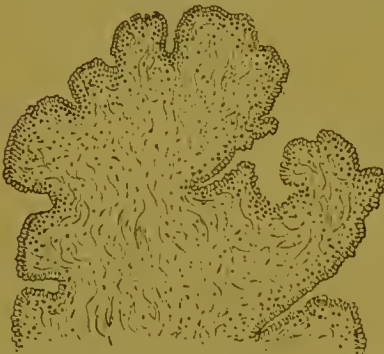


FIG. 4. Microscopical appearances of fibrous papillary polypus, showing the highly cellular periphery with well-formed connective tissue centre. $\times 40$.

In Case III. the seat of active growth is undoubtedly confined to the fibrous tissue of the mucosa, which, growing outwards in a papillary manner, receives a covering of epithelial cells.

From the primary outgrowth secondary offshoots arise in a similar manner, so that the rough, irregular cauliflower surface already mentioned is formed.

From this eccentric growth of the fibrous tissue processes, each covered by a layer of epithelium, the tumour on section appears at its periphery to be riddled with glands; these, on closer

examination, however, may be seen to be the interstices between the fibrous tissue outgrowths, and are not glandular in nature.

That such is the evident development and growth of this somewhat rare variety of cervical tumour is well demonstrated by the microscopes I have placed before you (Fig. 4). From these it will be seen the area of active growth, as recognised by its cellular nature, is situated immediately beneath the epithelium, while as we approach the centre of the primary outgrowth the connective tissue becomes less and less cellular and more fibrous.

The type of neoplasm represented in Case II. is also essentially of a fibrous character, but seems to differ from the papillary growth just described, more in its probable origin and mode of growth than in its structure.

As already stated, this tumour, though mainly composed of connective tissue in all degrees of development, was specially characterized by the presence of canalicular spaces coursing through its substance in all directions. These spaces, lined by columnar epithelium, are evidently enlarged glands. It would thus appear as if the tumour owed its origin to an active hypertrophy of the fibrous tissue over a limited area of the uterine mucosa. The glands situated in this area, though not in themselves actively proliferating as in adenoma, remain and are enormously hypertrophied from the active increase of their surrounding stroma. As in the papillary variety, the seat of active growth would appear to be immediately beneath the epithelium, as there the tissue is more embryonic and cellular in character; but, unlike the papillary type, there seems no disposition to the secondary papillary offshoot, which gives that type of tumour its rough cauliflower-like surface.

The tumour thus described closely corresponds with fibro-cystic tumours of the mamma, and which, among many other names, has been described as fibroma intra-caniculare and cysto-sarcoma fibrosum. The cysts are formed by dilatation of the enclosed glands. Like these mammary tumours, they must be looked upon as benign, although in a certain percentage of cases (4 per cent.) liable to local recurrence.

A case by Rosenstein of recurrence in the mamma closely simulates Case II. in its history.

They are never associated with metastases or infiltration of the surrounding lymphatics, and it would appear, when they recur, that it is not due to a local malignancy, but to another portion of the glandular structure becoming active, as shown in my case, where, after removal of one polypus, others were felt commencing. The extremely embryonic and cellular character of the periphery of these growths might certainly lead one at first sight to classify them as sarcomata, but from these they materially differ, in that the cells do not maintain their embryonic character, but rapidly develop into mature connective tissue. This sarcomatous appear-

ance is further enhanced by the embryonic character of the blood-vessels in the periphery. These, from the feeble supporting stroma, frequently rupture, and thus account for the hæmorrhages found here and there through the substance of the growth, and may possibly also account for the severe hæmorrhages which form so characteristic a clinical symptom of these tumours.

The fibrinous polypus derived from the same case is of great interest. These growths, though at all times rare, are specially so in the non-puerperal state,—Fraenkel and others even denying their existence independent of pregnancy. Its probable origin has in this case been the rough, irregular surface formed by the commencing polypi, which I described as felt on examination. Upon this rough surface the blood has seemingly become coagulated, and deposited layer after layer in a stalactite manner, till its pedicle has given way and it has been spontaneously expelled. In this manner it is exactly similar to the fibrinous polypi found after labour, which owe their origin to a retained portion of ovum or the roughened surface of the placental site. Naturally, after the examination of this polypus, it is impossible to say how many of the nine removed had been of like nature and how many had been fibrous, but there can be no doubt of the multiple nature of the fibrous variety, as I felt two on examination of the uterine cavity subsequent to the removal of the one I showed.

In the specimen from Case IV. it would seem we have a combination of the previously described variation, viz., glandular and fibrous, but differing markedly from both in its investment of squamous epithelium. In its simplest variety as described by Semon, as a papillary outgrowth from the vaginal aspect of the cervix, such a type of tumour is but to be expected if one considers the normal structure of its site (viz., papillæ covered by squamous epithelium); but when arising from at least $\frac{3}{4}$ ths of an inch within the cervical canal, where papillæ and squamous epithelium are unknown, the structure of the tumour becomes most interesting and difficult to account for.

This covering of squamous epithelium on the cervical growths was first described by Ackermann, and has already been demonstrated to this Society by Underhill.

The stroma in this tumour does not seem to be so embryonic in its structure as in Case II., nor has it the papillary method of growths described in Case III., but it appears to have the nature of a localized hypertrophy in which glands and stroma equally participate.

There is yet another form of mucous polypus, an example of which I show,—*i.e.*, a retention glandular cyst or Nabothian follicle. These are of extremely common occurrence, and require but passing mention.

The varieties of neoplasm I have shown, though they differ considerably from one another, must be considered as essentially

mucous in their origin. Their variety consists in the type of tissue which more actively proliferates. Thus in Case I. the glands seem solely concerned, in Cases II. and III. the connective tissue is alone active, while in Case IV. both glands and connective tissue participate.

These growths are thus by some authors—as Pozzi, in his latest work on Gynæcology—not only scantily treated, but looked upon as analogous to ordinary chronic endometritis, only differing in the fact that the inflammation is localized and not general. Doubtless such a classification may be convenient for descriptive purposes, but as a scientific description cannot be too strongly condemned. If adopted throughout, uterine fibromyomata accordingly must be looked upon as localized metritis, and ovarian fibromata as a type of ovaritis,—surely, to say the least of it, a confusing and absurd description. It is surely strange, then, that the papillary fibromata of the uterine mucosa should be looked upon as mere inflammatory excrescences, while similar conditions of the mamma, nose, and intestines are described as definite and independent neoplasms.

Again, growths of the cervix, such as described in Case III., are frequently spoken of as cauliflower papillomata, and are looked upon as being closely allied to cauliflower carcinoma, and even some eminent observers characterize them as initial stages of the latter. That carcinoma or epithelial proliferation may in some cases be the result of the irritation from the actively-growing connective tissue process I do not wish to deny, such cases having been cited by Wagner¹ and others, but to look upon these two varieties of neoplasia as more nearly related to each other than that of cause and effect I cannot entertain. The structures of each are as independent of one another as that of the short-stemmed pipe of the British workman is to the cancer in his lip, yet in both instances it is possible the one would not be present without the other. Yet undoubtedly benign papillomata may exist independently without tending to take on malignant action, just as safely as many a working-man smokes with impunity his short cutty without developing labial cancer.

The gross appearance of these growths is markedly cauliflower-like, but the use of this term as applied to them should be discontinued, as it is so commonly, though unnecessarily, applied to the papillary epithelioma found in this situation, with which, as has been already shown, it has not the slightest connexion, at least in so far as microscopic examination or clinical symptoms can help us.

The usual clinical features of these mucous growths are already too well known to require but passing mention. They are usually associated with hæmorrhage and leucorrhœa. The former probably has a two-fold origin,—first, from the tumour itself, as its bloodvessels

¹ *Gebärmutter Krebs*, p. 13.

are at the periphery embryonic in type, and having a scanty supporting framework, are liable to rupture; and, secondly, from the uterine mucosa generally, this being in a state of permanent congestion. The leucorrhœa is perhaps the most characteristic symptom, and is always present, sometimes in such quantities as to be almost incredible; its character varies, but is generally clear, watery, and odourless, there being little tendency to necrosis of the tumour tissue, which gives the almost characteristic odour to the papillary epitheliomata. The size of the growths is usually limited to that of a hen's egg, but, as Case II. shows, this may be much exceeded, although I may here say that I have failed to find any described case of growths approaching in size those in this case removed.

They, unlike myomata, may occur at all ages, and this feature perhaps forms the most interesting practical point in their consideration. Occurring, as they often do, late in life, many years after the menopause, they give rise to the always gravely suspicious symptom of post-climacteric hæmorrhage, and may be said to form the majority of the small minority of cases in which this symptom is not due to malignant disease.

The diagnosis of papillary fibrous growths from epithelial papillomata is apt to be uncertain; but the absence of decaying tissue giving rise to a fœtid odour, and the slight tendency to hæmorrhage on examination, should help greatly to distinguish the former.

The treatment may be summed up in one word, viz., removal. This is most conveniently performed, if the pedicle be small, by twisting and scissors, and if large by the *écraseur*.

As they are (unlike myomatous polypi) nourished through their pedicle, the hæmorrhage is frequently copious after its division, and it is thus well to sear the divided stump thoroughly with the thermo-cautery, by which means not only is the bleeding arrested, but recurrence of the growth averted.

From the foregoing I may, in conclusion, say, that it has been my object to bring before the Society these observations upon this somewhat little-considered subject of mucous polypi, and have tried to show—1. That though mucous in their origin these growths vary greatly in structure, there being glandular, fibroglandular, and papillary fibrous and fibrinous varieties 2. That they are benign, but may have a local malignancy and recur, but are essentially different from papillary epitheliomata, for which they may be mistaken by their gross appearance. 3. That they frequently are associated with the post-climacteric period, and are thus liable to simulate the signs of malignant disease at this period; and lastly, as regards treatment, it is well, after their removal, to sear the remaining stump thoroughly, to arrest the almost constant accompanying hæmorrhage, and also prevent recurrence of the growth.

From these conclusions and the specimens I have shown, I trust that I have been able to your satisfaction to demonstrate that, from their varying and interesting structure, and from their well-marked and at times severe clinical characteristics, these growths surely demand more than the trivial and altogether inadequate description so frequently bestowed upon them.

The beautiful microscopic sections of these growths I have the pleasure of showing have mostly been prepared for me by Dr Stiles in the Surgical Laboratory of the University.

